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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,321	03/29/2004	Alex Levit	91820	2727
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WELSH & KATZ, LTD 120 S RIVERSIDE PLAZA 22ND FLOOR CHICAGO, IL 60606				
EXAMINER				
JONES, PRENELL P				
ART UNIT		PAPER NUMBER		
2619				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/812,321

Applicant(s)

LEVIT ET AL.

Examiner

PRENELL P. JONES

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/9/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-84 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-46, 83 and 84 is/are allowed.
- 6) ☒ Claim(s) 1-6, 11-31, 47-54, 56, 59-78 and 80 is/are rejected.
- 7) ☒ Claim(s) 7-10, 55, 57, 58, 79, 81 and 82 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :8/26/04,8/15/05,10/3/05,2/12/07,4/17/07,11/9/07.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 17-31 and 59-70 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 17-31 and 59-70 are non-statutory because as disclosed in paragraph, [0043] of the specification defines the medium to also include a transmission medium, which is non-statutory.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

Art Unit: 2619

and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-6, 11-21, 25-27, 29, 47-54, 56, 59-66, 68, 71-78 and 80 rejected under 35 U.S.C. 103(a) as being unpatentable over Network Working Group/NWG (Non-patenting Literature, June 2001) in view of Akaba et al (US PGPUB 20050249233) and Zelig et al (US PGPUB 20060109802).

Regarding claims 1, 17, 47, 59 and 71, Network Working Group/NWG (Non-patenting Literature, June 2001) discloses an IPORPR environment (Section 2 and 3) wherein there exist a plurality of RPR rings with multiple L3/layer-3 devices (Section 1.1 and 1.2), path selection, layer2/layer3 interaction (section 3.1, 3.2 and 4.2). The NWG further discloses cost metrics (Section 3.3), and that the devices coupled to the rings include a plurality of ingress and egress nodes (section 4.2)

Although NWG fails to teach or suggest uploading host table to Layer-3, in a networks and creating entries in tables, Akaba et al (US PGPUB 20050249233) discloses a multicast communication in a ring network, wherein the topology includes using RPR as a ring network (paragraph 0063), node selects topology table as it associated with ring (paragraph 0057 and 0059), lookup tables are uploaded daily in determining cost for services (paragraph 0040, 0117, 0129,

Art Unit: 2619

0157, 0211, 0246, 0247, 0282, 0289), and Zelig et al (US PGPUB 20060109802) discloses a multiple ring network which are subnets of RPR that consist of a plurality of Level-3 RPR devices that communicate with external devices (Fig. 1, 8, 11), wherein the architecture includes nodes with processors include forwarding tables wherein the forwarding table include entries which are updated (paragraphs 0016, 0027, 0028, 0043, 0127, 0128, 0129).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement uploading host tables to ring nodes as taught by the combined teachings of Akaba and Zelig with the teachings of NWG for the purpose of further providing management of services in a multi-user multicast environment.

Regarding claims 2, 18, 48, 60 and 72, NWG further discloses that the architecture framework includes RPR ring subnet domain (Section 3.1, 3.2, 3.3).

Regarding claim 3, 5, 4, 11, 19, 20, 26, 49, 50, 53, 61, 62, 65, 73, 74 and 77, NWG further discloses selecting and determining path with respect to metrics and cost criteria value/minimum/maximum value (Section 3.3, 4.1 and 4.2).

Regarding claim 6, 21, 51, 63 and 75, NWG further discloses dynamically determining virtual terminals (Section 3.2).

Regarding claim 12, 27, 54 and 66, NWG further discloses implementing calculating routes with respect to span between nodes in association with layer 2 and layer 3 (Section 3.3).

Regarding claim 14, 29 and 68, NWG further discloses that simple metrics, such as the number of hops are utilized in the calculation of shortest path and the most efficient ring direction for delivery of packets (Section 3.3, page 7).

Allowable Subject Matter

5. Claims 32-46 and 83-84 are allowed over prior art.
6. Claims 7-10, 22-24, 28, 30, 31, 55, 57, 58, 67, 69, 70, 79, 81 and 82 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter: The prior art fail to teach or suggest with respect to claim 7 and 22, uploading includes flooding router LSA's with a mask, with respect to claim 10, 25, uploading including external LSA advertising to layer-3, network, with respect to claim 13, 28, 43, 55, 57, 58, 67 and 79, total cost based on cost factor and on interface costs that are assigned in layer-3, with respect to claim 15, 30, 45, 57, 69 and 81, ingress nodes configured with an interface cost on said layer-3 network, and wherein said metric is determined proportionally to said

Art Unit: 2619

interface cost and to number of hops, with respect to claim 32, second router disposed in at least one of external elements, and defining paths from external elements to designated ones of said nodes of said ring, each of said paths leading through a selected one of ingress nodes, with respect to claim 58, 70 and 82, ingress nodes configured with an interface cost on said layer-3 network, and wherein said metric is determined by said interface cost divided by the number of hops, with respect to claim 83, non-interface nodes of the ring nodes of said ring network creating second entries in a second host table, each of said second entries including an address of a respective one of said interface nodes and a second metric, using said second host table identifying optimum egress paths from said non-interface nodes through different ones of said interface nodes of said ring network respectively to said second metric.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 571-272-3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public

Art Unit: 2619

PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Wing F. Chan/
Supervisory Patent Examiner, Art Unit 2619
4/28/08
Prenell P. Jones

April 27, 2008